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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,464	11/14/2001	Yasuhige Nakamura	011523	6989

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WASHINGTON, DC 20006

EXAMINER

RODEE, CHRISTOPHER D

ART UNIT	PAPER NUMBER
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1756

DATE MAILED: 07/02/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/987,464

Applicant(s)

NAKAMURA ET AL.

Examiner

Christopher D RoDee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 June 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 6-9 and 19-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 10-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

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## DETAILED ACTION

### *Election/Restrictions*

The election of claims 1-5 and 10-18 in Paper No. 7 is again acknowledged. Claims 6-9 and 19-22 remains withdrawn from consideration. The requirement is still deemed proper and is maintained as FINAL.

### *Priority*

As discussed in MPEP 1895, "To obtain benefit under 35 U.S.C. 120 of a prior PCT application designating the U.S., the continuing U.S. national application must

(A) include an appropriate reference to the prior PCT application (either in the application data sheet (37 CFR 1.76) or in the first sentence of the specification),

(B) be copending with the prior PCT application, and

(C) have at least one inventor in common with the prior PCT application.

See MPEP § 201.11. A U.S. national application is copending with an international application (PCT) if the prior international application was pending on the filing date of the subsequent U.S. national application.

If the prior application is an international application, the examiner must ascertain (B) and (C) above by either examining the national stage application file of the international application, or by examining the international application file, or requiring applicant to submit sufficient evidence to prove that the international application was copending with the U.S. national (35 U.S.C. 111(a)) application claiming benefit under 35 U.S.C. 120. The evidence submitted to prove that the international application was copending with the U.S. national (35 U.S.C. 111(a)) application should include a certification from applicant that neither the

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international application nor the designation of the United States was withdrawn or considered to be withdrawn prior to the filing date of the U.S. national (35 U.S.C. 111(a)) application.

Additionally, if the 20 month period from the priority date of the international application expired before April 1, 2002 and the U.S. national (35 U.S.C. 111(a)) application was filed later than 20 months from the priority date of the international application, the evidence should also include proof of filing a demand electing the United States within 19 months from the priority date. The proof of filing the demand may be in the form of a copy of the "Notification of Receipt of Demand by Competent International Preliminary Examining Authority" (Form PCT/IPEA/402) showing that the demand was received prior to the expiration of 19 months from the priority date, and a copy of the "Notification Concerning Elected Offices Notified of Their Election" (Form PCT/IB/332) showing the election of the United States.) If the parent international application was not copending (i.e., abandoned or withdrawn), benefit under 35 U.S.C. 120 is not possible."

The Examiner hereby makes the requirement that applicant submit sufficient evidence to prove that the international application was copending with the U.S. national (35 U.S.C. 111(a)) application claiming benefit under 35 U.S.C. 120 and to show that the instant application has at least one inventor in common with the prior PCT application..

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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Claims 1-5 and 10-18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The instant claims have been amended to recite an "ester type resin which contains an ester component represented by the following formula". The claims now specify that the ester type resin contains the ester component given by the formula rather than that the resin is represented by the formula. These are different concepts. In the claims and specification as originally filed "the ester type resin" is fully represented by the formula. As amended, the formula is a component of the resin but presumably the resin can contain other components. The presence of other component represents new matter.

As seen in specification Example 1, which corresponds to corresponds to the invention of Example 1, the ester type resin is fully represented by the formula (II). The formula is not a component of the resin; it is the resin. Also see Table 2 for similar formulations. It is apparent from this disclosure that the ester type resin is represented by the specified formula and that there are no other components present in the resin. The claims, which include other components, present new matter.

Toners 40, 41, and 48 are formulated in the manner of Example 8 are presented in Table 7. In these examples the ester component given by the specific formula(e) is/are a reactant of the polyester and there is an additional ester component (Ester (1)). This additional ester is fully represented by the formula. As now presented in the claims the formula is a component of the resin but presumably the resin can contain other components. The presence of other component represents new matter. This example corresponds to the invention of claims 10 and 18.

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The specification as filed does not describe the invention as currently claimed. New matter is present because the ester type resin can include other components.

The Examiner notes that this amendment was made in an attempt to comply with the § 112, second paragraph, rejection presented in the prior Office action. The Examiner did not suggest the amendment presented. The Examiner suggested that the term "component" be used in place of "resin" for the ester.

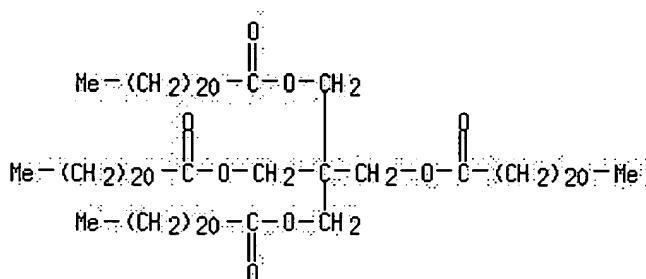
***Claim Rejections - 35 USC § 102***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 10-13, 16, and 18 are rejected under 35 U.S.C. 102(a) and/or (b) as being anticipated by WO 99/23534 considered with Nakanishi *et al.* in US Patent 6,326,115. Nakanishi is the US national stage patent of the WO document. As discussed in the last Office action, the content of the WO document and Nakanishi are believed to be identical because of this relationship. Applicant did not disagree with the Examiner's position. Consequently, the WO document and Nakanishi are taken as having identical disclosure.

Applicant traverse this rejection because the description of the Nakanishi do not disclose the ester type compound given by the formula (XI). The Examiner has carefully reviewed the reference, and, although in agreement that trimethylolpropane tribehenate does not meet the requirements of the polyester, must maintain the position that the reference discloses a polyester having as a reactant a unit of the formula (XI). Specifically, the reference discloses preparation of a polyester resin having pentaerythritol tetrabehenate, which meets the requirements of formula (XI), as a reactant. This compound is of the formula:

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Also see specification page 20, lines 14-28. As seen in Example II-1, an isocyanate-group containing polyester prepolymer ( $\alpha$ 1) (col. 24, l. 31-43), a "dead" polymer (ii-3), pentaerythritol tetrabehenate, and cyanine blue are mixed followed by addition of ketimine compound  $\beta$ 1, which is disclosed in the reference as an extension agent and/or crosslinking agent. These materials are reacted to form the modified-polyester having pentaerythritol tetrabehenate as a component. The prepolymer ( $\alpha$ 1) appears to be a polyester prepolymer because of the reaction of ethyleneoxide adduct of bisphenol A and isophthalic acid. Reaction of the prepolymer ( $\alpha$ 1) having isocyanate groups with pentaerythritol tetrabehenate appears to result in a urethane bond-containing polyester as the toner binder resin (col. 2, l. 40-58). It appears that the produced modified polyester inherently has chloroform insolubles because of the presence of the ketimine compound, which would crosslink the polyester. The toner contains this polyester resin as the sole binder resin so it is present in an amount of 100% of the polyester resin (see pending claim 18). The reference discloses the use of polypropylene wax in the toner (col. 9, l. 62) with the amount of 3 weight % specifically disclosed (col. 10, l. 25). In the instant claims the term "resin" is considered to be synonymous with "polymer". Polypropylene is clearly a polymer and, thus, meets the requirements of a resin.

This rejection is applied in the combination and alternative of 35 U.S.C. 102(a) and/or (b) because there is no copy and no certified translation of the international application (PCT/JP/01678) to show § 120 priority. See 35 USC 365(c) and MPEP 1895.01.

***Claim Rejections - 35 USC § 103***

Claims 1-3, 10-13, and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/23534 considered with Nakanishi *et al.* in US Patent 6,326,115, in view of Gruber *et al.* in US Patent 4,578,338, still further in view of Tomono *et al.* in US Patent 4,997,739.

The WO document was discussed above based on the corresponding English language disclosure in Nakanishi. Additionally, this document states that waxes may be added to the toner (col. 9, l. 57 - col. 10, l. 26; col. 16, l. 1-3). Specifically mentioned waxes include polypropylenes and pentaerythritol tetrabehenate (col. 9, l. 62; col. 10, l. 1; Example I-2). The wax is present in a preferred amount of from 3 to 30 weight %. This combination rejection is applied against claim 16 in the event the reference's disclosure does not meet the requirements of § 102. The rejection is also applied to claims 10-13 and 18 in the event the specific formulation of Example II-1 does not disclose a modified polyester with chloroform insolubles.

The reference does not disclose the number average molecular weight of the polypropylene (claim 17) or the combination of the polypropylene and pentaerythritol tetrabehenate (claims 1-3).

Gruber discloses that improved developing and fixing is obtained when a wax having a molecular weight of from about 500 to 20,000 is added to a toner having a colorant and a binder resin (Abstract). Useful binder resins include polyesters and polyurethanes (col. 3, l. 54 & 55). The wax is added in an amount of from about 2 to about 20 weight percent (col. 5, l. 20-25). The reference discloses commercially available polypropylenes as having a molecular weight of from 4000 to 6000 such as Viscol 550P (col. 5, l. 1-19). The Gruber reference does not specify the basis of the molecular weight measurement (i.e., number-average).

Tomono discloses a polypropylene wax for addition to a toner such as Viscol 550P (Example 1). This reference states that the preferred molecular weight range of the



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polypropylene is based on a number-average measurement (patent claim 1), such as range of from 2000 to 6000. The wax gives improved fixing by reducing offset.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to add a polypropylene to the toner of the WO document in an amount of about 3 weight percent because the WO document suggests this wax and this amount of inclusion while the supporting references teach that polypropylene wax is an effective component added to a toner for similar purposes and in similar amounts. The artisan would also have found it obvious to use the polypropylene at a number-average molecular weight of 6000 because the primary reference suggests polypropylene as a release agent for fixing, Gruber teaches that polypropylenes with molecular weights of from 4000 to 6000 are effective toner additives to improve fixing, and Tomono discloses that polypropylenes with number-average molecular weights of from 2000 to 6000 are effective offset-preventing agents during fixing. Given the cumulative teachings of the references the artisan would have found it obvious to use the polypropylene in amounts of about 2 or 3 weight percent because these amounts are specifically disclosed by the references for the polypropylene.

With respect to claims 1-3, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the mixture of pentaerythritol tetrabehenate and a polypropylene wax because the reference discloses each of these components as effective in the invention for their stated purpose and it is *prima facie* obvious to use a mixture of the exemplified waxes because each is taught by the reference to be effective for the same purpose. "It is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose.... [T]he idea of combining them flows logically from their having been individually taught in the prior art." *In re Kerkhoven*, 205 USPQ 1069, 1072 (CCPA 1980).

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With respect to claims 10-13 and 18, the reference specifically teaches that the modified polyester includes a crosslinking agent and/or an extension agent (col. 2, l. 52-53). Given the limited choices of and the requirement that either or both of the crosslinking agent and/or an extension agent are present, the artisan would have found it obvious to include a crosslinking agent in the modified polyester (II). The artisan would immediately recognize that crosslinking would bring about a degree of chloroform insolubles.

Applicant traverses this rejection as previously set forth because none of the reference disclose a compound meeting the requirements of the formula (I). Clearly, pentaerythritol tetrabehenate meets this requirement.

Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gambayashi *et al.* in US Patent 6,335,139.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gambayashi *et al.* in US Patent 6,335,139 as applied to claims 1 and 2 above, and further in view of Gruber *et al.* in US Patent 4,578,338, still further in view of Tomono *et al.* in US Patent 4,997,739.

Applicant traverses these rejections as previously set forth based upon the filing date of the international application. As noted previously there is no copy and no certified translation of the international application (PCT/JP/01678) to show § 120 priority. See 35 USC 365(c) and MPEP 1895.01. As discussed in MPEP 1895.01, "A copy of the international application (and an English translation) may be required by the examiner to perfect the claim for benefit under 35 U.S.C. 120 and 365(c) if necessary, for example, where an intervening reference is found and applied in a rejection of one or more claims." The Examiner makes the requirement for both a copy of the international application and the certified translation should applicant continue to traverse on this basis.

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Lacking any other reasons for traversal, the rejections over Gambayashi are maintained.

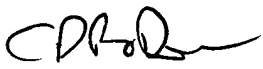
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher D RoDee whose telephone number is 703 308-2465. The examiner can normally be reached on most weekdays from 6 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 703 308-2464. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872-9310 for regular communications and 703 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-0661.

cdr  
July 1, 2003

  
**CHRISTOPHER RODEE**  
**PRIMARY EXAMINER**